

SPARK GAP

Vol. 29, Issue 11, November 2012 *MARC - Serving Central Indiana Communities for twenty-nine years*

On Our MARC...

Many thanks to the MARC members who took part in our annual Goblin Patrol project on Halloween night. I am pleased to say that the evening was quiet and uneventful, just as it should be. And did I mention it was dark too? I know the Sheriff's Dept. appreciates having our group watching over the bridges along I-65, so they can focus on their neighborhood patrols.

Two days before Halloween on Oct. 29th, Hurricane Sandy made landfall in New Jersey and the amateur radio community was ready. It was just this past summer that a mock test had been staged in which a hurricane did extensive damage to the Connecticut area. Little did they know how soon they would be called into action to employ the very skills they had so recently practiced. You can read more about ham radio's response at <http://www.examiner.com/article/ham-radio-s-response-to-hurricane-sandy-is-reviewed-and-praised>.

The weekend of Nov. 17th and 18th is the Fort Wayne Hamfest and Indiana ARRL Convention sponsored by the Allen County Amateur Radio Technical Society. Of course, we hope you will join us for the MARC meeting on Saturday morning at 8:00 a.m., before heading north to re-stock your shack.

Please mark your calendar for our annual holiday breakfast/meeting on December 15th, when we will get a chance to wish each other the best of the season.

Lastly, just a reminder that all of our dues expire on Dec. 31st, so please remember to renew your membership. Your support of the Mid-State Amateur Radio Club is much appreciated.

Bob - KC9NJM
President

ARRL Has a New iPhone. iPad, iPod Touch App.

If you are a member of ARRL you can use this new application on the iPhone, iPad and the iPod Touch to access QST. This new app is available on the "Apple App Store" at no cost to you. With this app you can access current issues of QST Magazine, My QST Library, and the QST Store.

Using the QST app:

- From your iOS device, go to the Apple App Store to search for and install the **free** QST app.
- Verify your Apple ID Password
- Open the app and go to the "QST Catalog" to browse available digital issues
- Tap on the cover of an issue and select "Read" or "Download"
- Log in with your ARRL website Username and Password (If you do not have an ARRL website Username and Password, please register at www.arrl.org/myarrl)
- Each time you download an issue in the app, it is added to the "My QST Library" to view offline.

Cont.

Important:

Before viewing issues offline, you must first initialize each issue online using your ARRL website login.

- To stream embedded video and audio, you must be connected to the Internet.
- This app may send anonymous usage statistics to ARRL and our service providers to help us improve QST and better meet the needs of our members. To disable sending usage information, turn ON the "Disable Tracking" feature for the QST app in your iOS device settings. For more information, visit the [Digital QST FAQ](#) and the ARRL [Online Privacy Policy](#).

At the present time there is not an application for Android users.

M.A.R.C. One-Day Technician License Class

This may be a bit early but I wanted to bring everyone up to speed on our plans to sponsor a one-day Technician License Class on **Saturday February 9, 2013**. If you know of someone who is interested in taking the class refer them to secretary@midstatehams.org / .

Seating will be limited to 25 students so they should register early to insure a spot. We require all students to purchase the Technician Class License Manual, Second Edition. <http://www.arrl.org/shop/Ham-Radio-License-Manual-Revised-2nd-Edition/?page=1>

The class will be nine hours of instruction with testing to follow. The class begins promptly at 8AM in our meeting room at the Johnson County EOC.

Thanks for your help in passing the word.

Jack W8ISH
Class coordinator

First lesson of Superstorm Sandy: Improve communication

Darren Hayes, professor, Pace University's Seidenberg School of Computer Science and Information Systems reports in the aftermath of Hurricane Sandy

He says:

Interestingly, older technology played a vital role after this disaster.

The Verizon network suffered widespread outages and with no electricity, telecommunications were problematic. The old corded telephones were plugged in and there were lines for payphones – telephones that we thought were a distant memory. Others resorted to using amateur radio (HAM) to communicate, which was very effective. HAM radio has networks dedicated to communications outages (RACES, ARES). A battery-powered radio was my only connection to the outside world at one point.

Read his article at

<http://thehill.com/blogs/congress-blog/technology/267421-first-lesson-of-superstorm-sandy-improve-communication>

Two Old Hams

Two elderly hams had been friends for many decades. Over the years they had shared all kinds of activities and adventures on the ham bands. Lately, their activities have been limited to meeting a few times a week to play cards.

One day they were playing cards when one looked at the other and said, 'Now don't get mad at me.....I know we've been friends for a long time.....but I just can't think of your name and your call.!

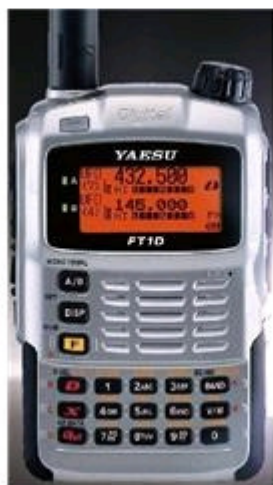
I've thought and thought, but I can't remember them.

Please tell me what they are."

His friend glared at him. For at least three minutes he just stared and glared at the gray haired old man..

Finally he said, "How soon do you need to know?

~~ NEW FROM YAESU ~~



COMING SOON!
MANUFACTURER: YAESU
MODEL: FT-1DR

FT1D Digital Portable Transceiver is the first Amateur Radio Dual Band Digital/Analog Transceiver employing advanced C4FM FDMA digital technology that opens the door for thrilling entirely new digital communication features. A new era of Digital Communications in Amateur Radio begins NOW with the introduction of the Yaesu FT1D Handheld Transceiver.

Pricing and availability has not yet been announced for North America. The information shown is preliminary information and subject to change without notice or obligation.

Make a magnetic loop antenna for 7-21 mhz



Magnetic Loop Diagram



Magnetic Loop antenna

This antenna has several advantages, not least being only 1 metre diameter! This loop relies on being horizontally polarized and receives only the magnetic wave, thus as most noise in the domestic environment is vertically polarized and electrical wave, it delivers low noise to your transceiver/receiver, which makes for nice clean listening. In addition any signal arriving in the direction of the loop end on will be nulled out, this can be useful to get rid of an interfering signal by simply rotating the loop leaving the desired signal in the clear. It can be used indoors with ease and works well at ground level which is not the case for long wire/dipole antennas at shortwave wavelengths.

So what are its disadvantages? Well its tuning is critical, such that for a small change in frequency the antenna will need to be retuned at the loop end. This is even more important for transmitting where a high reflected wave (swr) due to not being tuned correctly will damage the output stage of your transmitter! In addition due to the very high "Q" of the loop, very high voltages can build up on the loop tuning capacitor even with low amounts of power from your transmitter. It is for this reason I recommend this loop is used with a transmitter of no more than 8 watts, any more and the ordinary broadcast tuning cap will arc over with spectacular results. Of course should you wish, a higher spec/bigger air spaced tuning cap would allow higher power output transmitters to be used. Also I consider the use of remote tuning using a fairly high geared motor and insulated coupling on the tuning cap essential. For shortwave listeners manual tuning would suffice.

In setting up the tuning of the loop, connect to a receiver and tune to 14 mhz. Now tune the loop which as it nears peak tuning will cause a whooshing sound. Stop the tuning you should now hear good strength signals in your receiver. For tuning for a transmitter, 1st use receive method then apply low power and fine tune loop tuning and tweak gamma match for lowest swr.

Magnetic loop dimension details

- Diameter of loop 1000mm
- Diameter of tube 15mm
- Width of base 780mm
- Diameter of support pipe 42mm
- Loop end spacing (for tuner) 50mm
- Height of support 1590mm
- Nylon board 210x240mm
- Nylon board 240x70mm
- Gamma match width 310mm
- Gamma/loop spacing 110mm

Construction Tips

- Use a bicycle wheel with no tyre on to help form the curves of the soft annealed copper tube
- Clean the tube with wire wool before any soldering
- Use a 100 watt soldering gun for the joints, but use a small blow torch first to get the copper at temperature to take a joint
- Force some timber with the corners planed off down the plastic plumbing pipe this will stiffen the pipe as the loop is quite weighty
- Use inverted shelf brackets to support the mounting pipe and make a wooden frame wide enough to hold up the loop



2012& 2013Indiana Hamfests

11/17/2012

Indiana State Convention (Fort Wayne Hamfest & Computer Expo)

Location: Fort Wayne, IN **Type:** ARRL Convention **Sponsor:** Allen County Amateur Radio Technical Society **Website:** <http://www.fortwaynehamfest.com>

11/24/2012

Evansville Hamfest

Location: Evansville, IN **Type:** ARRL Hamfest **Sponsor:** EARS and The Ham Station **Website:** <http://w9ear.org/hamfest.htm>

04/13/2013

Columbus Hamfest

Location: Columbus, IN **Type:** ARRL Hamfest **Sponsor:** Columbus Amateur Radio Club **Website:** <http://www.carcnet.org>

04/20/2013

North Central Indiana Hamfest

Location: Peru, IN **Type:** ARRL Hamfest **Sponsor:** Cass County ARC, Miami County ARC, Grant County ARC, & Kokomo ARC **Website:** <http://nci-hamfest.net>



MID-STATE AMATEUR RADIO CLUB

The Mid-State Amateur Radio Club meets the **THIRD SATURDAY** of each month in the basement of the Johnson County Emergency Management Agency, 1111 Hospital Road, Franklin, Indiana 46131.

See our website, www.midstatehams.org, for maps on how to get to our meeting.

Everyone is welcome; you do not have to be a HAM to attend our meetings or a member of the club.

WA9RDF
Repeater
146.835/
146.235 MHz
151.4 Hz PL Tone

Club Officers:
President: Robert Jones – KC9NJM
Vice President: Jack Parker – W8ISH
Secretary: Rhonda Curtis – WS9H
Treasurer: Jacki Frederick – KI6QOG
Repeater Trustee: Steve Brown – N9LC

Weekly Net: Sunday evening 7:00 PM ARES/RACES members and ALL RADIO AMATEURS

The Official Newsletter of the Mid-State Amateur Radio Club

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46131

Editor: Robert LaGrange N9SIU

Please send your articles to my email n9siu@yahoo.com no later than the 3rd of the month

